

REMARKS

Claims 1-5 and 8 remain pending in the present application. Claim 1 is amended to indicate that the sheet material is mechanically softened, which finds basis at page 4, lines 19-21 of the present specification. Likewise, claim 1 is amended to incorporate the limitations of original claims 6 and 7, hereby cancelled. No new matter is presented in the amendment.

The Examiner's attention is directed to copending U.S. Patent Application Serial no. 10/080,802, filed on even date herewith, which contains subject matter similar to that disclosed herein. A copy of the copending application will be provided in an Information Disclosure Statement to be filed on even date with this response.

Rejection under 35 U.S.C. §102(b) over Marshall

Claims 1, 3, 6 and 8 stand rejected under 35 U.S.C. §102(b) over Marshall (U.S. Patent no. 5,851,936). Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

Marshall discloses sheets of flash-spun plexifilamentary film-fibrils having improved elongation properties (Abstract), which are spun from the particular process disclosed therein. Marshall exemplifies several examples of such sheets which have been bonded with various bonding patterns, but not mechanically softened. In particular, Marshall's examples 1-7 (col. 5, bridging to col. 6) are disclosed to have been point bonded with "a linen and 'P' point pattern...without mechanical softening" (col. 5, lines 34-37). Likewise, Marshall's examples 8-14 (col. 6) are disclosed to have been point bonded with "a rib and bar pattern...without mechanical softening" (col. 6, lines 15-18). These examples focus on what is termed "soft structure point bonded" product (col. 6, lines 66-67). Marshall also exemplifies what is known as "hard structure" product, which is fully "area bonded" on both sides of the sheet (col. 7, lines 1-11). This hard structure area bonded product is irrelevant to the present invention, which is clearly claimed as having been mechanically softened and point bonded.

In contrast to Marshall's examples 1-14, the presently claimed flash spun film-fibril sheets are point bonded on both sides of the sheet with a ribbed point bonding pattern (i.e. "rib x rib" bonded). Marshall fails to disclose or suggest rib x rib bonding. Marshall's examples 1-7 are linen x "P" point bonded, and his examples 8-14 are rib x bar point bonded. As such, Marshall cannot be said to anticipate the presently claimed invention. Withdrawal of the rejection under 35 U.S.C. §102(b) is respectfully requested.

Rejection under 35 U.S.C. §103(a) over Marshall

Claim 7 stands rejected under 35 U.S.C. §103(a) over Marshall. Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

Claim 7 has been cancelled according to the present amendment, but its limitations have been inserted into claim 1. Accordingly, Applicants will address the present rejection as applicable to amended claim 1.

While recognizing that Marshall fails to disclose or suggest the claimed tensile strength, nail tear strength and Mullenburst strength of claim 1, the Examiner suggests that obtaining such parameters in the Marshall sheets would have been an obvious modification and merely “a matter of optimizing a result effective variable”, by “adjusting the quenching of the polymer” (Office Action, page 3, paragraph 4).

The Examiner fails to suggest what variable of Marshall should be adjusted and in what manner, to obtain film-fibril sheets with the limitations of claim 1, which amounts to an impermissible “obvious to try” standard of unpatentability. Withdrawal of the rejection is requested on this basis alone, for failure to establish a *prima facie* case of obviousness.

Present claim 1 requires that the film-fibril sheet material have a tensile strength in both the machine- and cross-directions of at least 74 N/inch. In contrast, none of the relevant point bonded examples of Marshall (Examples 1-14) achieve these tensile strengths in either direction, let alone in both machine- and cross-directions. The highest tensile strengths indicated in Tables I-IV of Marshall (cols. 5-6) are 2650 N/m (67.4 N/inch), which are obtained on sheets which have not been mechanically softened. There is nothing in the Marshall reference which would suggest that mechanically softening those point bonded sheets would act to increase tensile strength, and in fact, the skilled artisan would expect mechanical softening of such sheets to actually reduce tensile strength.

According to the present application, tensile strength (as well as the other claimed parameters) is unexpectedly improved by rib x rib point bonding of flash spun film-fibril sheets, and conducting that bonding under unusually mild conditions by reducing the pressure applied to each bonding point (specification, page 4, line 33, bridging to page 5, line 2). In addition to its failure to disclose or suggest rib x rib point bonding, Marshall contains no disclosure or suggestion of such mild bonding conditions, i.e. bonding using a softer backup roll of 60-70 Shore A. Withdrawal of the rejection is requested on these bases.

Rejection under 35 U.S.C. §103(a) over Marshall
in view of Miller

Claims 2, 4 and 5 stand rejected under 35 U.S.C. §103(a) over Marshall in view of Miller (U.S. Patent no. 4,091,137). Applicants traverse this basis for rejection and respectfully request reconsideration and withdrawal thereof.

Applicants hereby reiterate their comments in traverse of the application of Marshall to the present invention.

Miller discloses a porous nonwoven film-fibril sheet having optical transmission properties obtained by bonding such a sheet over the entire area of at least one surface with a pattern comprising from 50 to 1000 small fused regions per square inch, such that the embossed regions have an average optical transmission of at least 50% (Abstract).

Applicants respectfully submit that the skilled artisan would not have been motivated to modify Marshall in the manner of Miller, since one principal object of Marshall is to obtain sheets having high opacity, i.e. greater than 85% (col. 1, lines 55-60). In contrast, Miller is directed at forming sheets having high optical transmission. The objects of Marshall and Miller are diametrically opposed! In this regard, the Examiner's attention is directed to Miller at col. 6, lines 65-68, wherein it is disclosed that use of a backup roll having at least "70D hardness" is critical, as is achieving at least 50% transparency in the embossed areas.

As such, the references are improperly combined, because the modifications suggested by Miller would destroy the object of Marshall. No *prima facie* case can be said to exist. Withdrawal of the rejection and allowance of the claims is requested.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,



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Enclosures